

DRAWING AMENDMENTS:

Please delete the original sheet with FIG.1, and insert the Replacement Sheet.

REMARKS

Reconsideration of this application, as amended, is requested.

Claims 1-4 remain in the application. Independent claims 1 and 3 have been amended to define the invention more clearly.

The Examiner objected to the original drawings because the specification did not describe the reference numeral 16 shown in FIG. 1.

This amendment includes a Replacement Sheet for FIG. 1. The Replacement Sheet does not include the reference numeral 16 and does not include the lead line that had extended from the reference numeral 16.

Claims 1 and 2 were rejected under 35 USC 102(b) as being anticipated by Published U.S. Patent Appl. Pub. No. 2002/0003075 (now U.S. Patent No. 6,550,596) to Shiozaki et al. The Examiner identified portions of the Shiozaki et al. reference that were considered to correspond to the elements recited in original claim 1.

The Examiner will appreciate that the Shiozaki et al. reference is assigned to the assignee of the subject invention. The two inventors of the subject application also were applicants' in the Shiozaki et al. patent. As a result, the applicants herein are very familiar with their earlier work embodied in Shiozaki et al.

There are several very significant differences between the subject invention and Shiozaki et al. In particular, the Shiozaki et al. device includes a leaf spring 9-1 that is biased into a position for closing an oil supply hole 7. However, a permanent magnet 10 is mounted in a position opposed to the leaf spring 9-1 and the oil circulation hole 7. Hence, the permanent magnet 10 exerts forces on the leaf spring 9-1 to deflect the spring 9-1 into a position for opening the oil circulation hole 9. Thus, the

permanent magnet 10 will keep the oil circulation hole in an open condition as shown, for example, in FIG. 3a of Shiozaki et al. The oil circulation hole 7 can be closed by activating the electromagnet 11 to generate a magnetic field in a direction opposite to the magnetic field of the permanent magnet 10. As a result, the electromagnet 11 cancels the magnetic field of the permanent magnet 10 so that valve is permitted to deflect into the closed position by the action of the leaf spring 9-1.

The invention defined by amended claim 1 does not have the permanent magnet required by Shiozaki et al. Accordingly, the valve 9-1 of amended claim 1 normally is in a closed position. However, the electromagnet can be activated periodically to deflect the valve member into the open position. Thus, whereas Shiozaki et al. employs a permanent magnet to keep a normally open position for the valve and uses an electromagnet to close the valve, the invention defined by amended claim 1 has no permanent magnet and uses the electromagnet to open the valve.

A second major different between the applicants' earlier Shiozaki et al. reference and amended claim 1 relates to the controlling factors of the external control type fan clutch. The Shiozaki et al. reference controls the fan speed merely by a single controlling factor, i.e. an engine rotating speed. In contrast, the invention defined by amended claim 1 controls fan rotating speed based on a plurality of signals selected from the cooling liquid temperature of a radiator, a fan rotating speed, the temperature of transmission oil, a vehicle speed, an engine rotating speed, the pressure of a compressor of an air conditioner and a turning-on or turning-off signal of the air conditioner. The Examiner will appreciate that original claim 1 had referred to the control as being "on the basis of at least one signal of" and proceeded with the recitation

of the optional signals from which the “at least one” would be utilized. However, the original specification and amended claim 1 clarify that the control is based on a plurality of the signals. Shiozaki has no suggestion of such a sophisticated and responsive control as recited in amended claim 1. Accordingly, it is submitted that the invention defined by amended independent claim 1 and its dependent claim 2 is not taught or suggested by the applicants’ earlier Shiozaki et al. reference.

Claims 3 and 4 were rejected under 35 USC 103(a) as being obvious over Shiozaki et al. Once again, the Examiner identified elements in the Shiozaki et al. reference that were considered to correspond to original independent claim 3.

Claim 3 has been amended to define the operation of the valve member in exactly the same manner as amended claim 1. For the reasons stated above, it is submitted that the very efficient operation provided by amended claim 3 is not taught or suggested by the applicants’ earlier Shiozaki et al. reference.

The Office Action openly acknowledges that several of the important operational aspects of the claimed invention are “not explicitly stated” in the applicants’ earlier Shiozaki et al. reference. Nevertheless, the Examiner summarily concluded that it is obvious that the apparatus of Shiozaki et al. is capable of performing a method with the various operational steps recited in original claim 3.

Counsel and the applicants agree with the Examiner that Shiozaki et al. does not explicitly state these operational aspects of the control as recited on the last eight lines of previously presented claim 3. However, counsel and the applicants disagree with the Examiner that “it is obvious that the apparatus of Shiozaki is capable of performing a method” as recited in the last eight lines of previously presented claim 3.

It is submitted that there is nothing in Shiozaki et al. that would motivate the skilled artisan to set an upper limit rotating speed

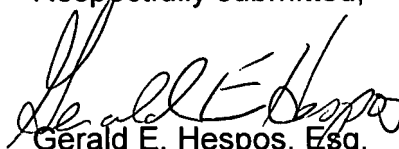
“to an optimum fan rotating speed required from the engine side; a fan rotating speed control signal is temporarily stopped on the basis of the differential speeds between an engine rotating speed, the fan rotating speed and said optimum fan rotating speed; the fan rotating speed control signal is temporarily stopped on the basis of an engine rotating acceleration or an accelerator (throttle) position acceleration; or a limit is given to a changing rate of the optimum fan rotating speed on the basis of the changing rate of said optimum fan rotating speed”

For these reasons and the reasons stated above with respect to the anticipation rejection of claims 1 and 2, it is submitted that amended claim 3 is patentable over the applicants' earlier Shiozaki et al. reference.

The assignee of the above-identified application also filed Application No. 11/235,428 and Application No. 11/244,272, both of which relate to control systems for fan clutches. Office Actions recently issued on the two co-pending applications. This amendment is submitted concurrently with an Information Disclosure Statement that identifies the references that were cited in these two recent Office Actions. Please charge our Deposit Acct. No. 03-1030 for any fees associated with the Information Disclosure Statement.

In view of the preceding amendments and remarks, it is submitted that claims 1-4 are directed to patentable subject matter and allowance is solicited. The Examiner is urged to contact applicant's attorney at the number below to expedite the prosecution of this application.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Gerald E. Hespos", is written over the printed name.

Gerald E. Hespos, Esq.

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